**St Mary’s Year 6 Maths overview**

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| **MNP** | **NCETM Spine Materials (subject knowledge development)** | **Additional resources to support understanding** | | | |
| [**Yr6 NCETM assessment materials**](C://Users/Aimee/Downloads/Mastery_Assessment_Y6_Low_Res%20(9).pdf) | **I See Reasoning** | **NRICH** | **White Rose** |
| **Numbers to 10 million**  - Reading and Writing Numbers to 10 million  - Comparing numbers to 10 million  - Comparing and ordering numbers to 10 million  - Rounding numbers | **1.30: TP 1:1-1.8, 2.1-2.8, 3.1-3.6**  **1.30: TP 2.9-2.10, 3.3**  **1.30: TP 5.1-5.13** | **P9-11** | Spot the pattern, p5  Different ways, p7  Explain, p9  Explain, p19  How many ways, p20 | [Round the four dice](https://nrich.maths.org/10426) | [Place value](https://wrm-13b48.kxcdn.com/wp-content/uploads/2020/07/Year-6-Block-1-Place-Value.pdf) |
| **Four operations**  - Using mixed operations  - Multiplying by 2-digit numbers  - Dividing by 2-digit numbers  - Solving worded problems  - Finding common multiples  - Finding common factors  - Finding prime numbers | **1.30: TP 4.1-4.8, 6.1-6.13**  **2.28: TP:** **1.1-1.5, 2.1-2.5**  **2.23: TP 1.1- 1.7, 2.1- 2.8, 3.1-3.3, 4.1-4.13, 5.1-5.6,**  **2.24: TP 1.1- 1.7, 2.1- 2.9, 3.1-3.7**  **1.31: TP 1.1-1.4, 2.1-2.5, 3.1-3.7, 4.1-4.5, 5.1-5.7** | **P12- 17** | Investigate, p24  Explain, p25  Explain the mistake, p27  I know…so…, p27  Is it the same? P30  True or false, p31  Missing digits, p34  Rank by difficulty, p37  I know…so… p38  Explain the mistakes, p40  Form of an answer, p41  How many ways, p42  How many ways, p43 | [Explore the number patterns you make](https://nrich.maths.org/8387)  [Moons of Vuvv](https://nrich.maths.org/1066)  [Mystery Matrix](https://nrich.maths.org/1070)  [Factor lines](https://nrich.maths.org/1138)  [Factor-multiple chains](https://nrich.maths.org/5578)  [Round and Round the Circle](https://nrich.maths.org/86)  [Counting Cogs](https://nrich.maths.org/6966)  [Four go](https://nrich.maths.org/5633) | [Four operations](https://wrm-13b48.kxcdn.com/wp-content/uploads/2020/07/Year-6-Block-2-Four-Operations.pdf) |
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| **Fractions**  - Simplifying fractions  - Comparing and ordering fractions  - Adding and subtracting fractions  - Multiplying fractions  - Dividing a fraction by a whole number | **3.9: TP: 1.1- 1.12**  **3.9: TP: 2.1- 2.9, 3.1-3.8** | **P18- 22** | How many ways, p46  Explore, p48  Different ways, p49  How many ways, p50  Rank by difficulty, p53  How many ways, p54  Explain the mistake, p55  Rank by difficulty, p55  How may ways, p55  I know…so…, p56  Explain, p57  Rank by difficulty, p58  I know…so…, p58  Which picture, p60 | [Rectangle tangle](https://nrich.maths.org/1048)  [Fraction Fascination](https://nrich.maths.org/5061) | [Fractions](https://wrm-13b48.kxcdn.com/wp-content/uploads/2020/07/Year-6-Block-3-Fractions.pdf) |
| **Decimals**  - Writing and reading decimals  - Dividing whole numbers  - Writing fractions as decimals  - Multiplying decimals  - Dividing decimals  - Multiplying decimals by a 2-digit whole number | **2.29: TP 1.1- 1.6, 2.1- 2.5** | **P18- 22** | Number lines, pg10  How many ways, pg11 |  | [Decimals](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/01/Year-6-2018-19-Spring-Term-Block-1-FINAL.pdf) |
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| **Measurements**  - Converting units of length.  - Converting units of Mass.  - Converting units of Volume.  - Converting units of Time. |  | **P30-33** | Explain the mistake, p66  Rank by difficulty, p66  Explore, p67, 68  Order, p68 |  | [Measures](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/SOL-Year-6-2018-19-Spring-Term-Block-4-FINAL.pdf) |
| **Worded problems**  - Solving worded problems |  |  |  |  |  |
| **Percentages**  - Finding the percentage of a number  - Finding the percentages of a quantity  - Finding percentage change  - Using percentage to compare |  |  | Different ways, p61 | [**Doughnut percents**](https://nrich.maths.org/6945)  [**Would you rather?**](https://nrich.maths.org/1118) | [Percentages](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/Year-6-2018-19-Spring-Term-Block-2-FINAL_v2.pdf) |
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| **Ratio**  - Comparing quantities  - Comparing numbers  - Solving worded problems | **2.27 TP: 1.1-1.8, 2.1-2.5, 3.1- 3.6, 4.1-4.10** | **P23-25** |  | [**Orange drink**](https://nrich.maths.org/2420)  [**Pumpkin Pie**](https://nrich.maths.org/1026) | [Ratio](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/Year-6-2018-19-Spring-Term-Block-6-FINAL.pdf) |
| **Algebra**  - Describing a pattern  - Writing algebraic expressions  - Writing and evaluating algebraic expressions  - Writing formulae  - Using formulae  - Solving equations |  | **P26-29** | Explain, p62  If I know…then I know…p63  Which answer, p63  Which one, p64  Explain, p64, 65 | [Domino sets](https://nrich.maths.org/9965)  [Break it up](https://nrich.maths.org/2284)  [Holes](https://nrich.maths.org/6529)  [Button-up some more](https://nrich.maths.org/7350)  [Plenty of pens](https://nrich.maths.org/1117)  [Two and two](https://nrich.maths.org/twoandtwo) | [Algebra](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/Spring-Year-6-2018-19-Block-3-FINAL.pdf) |
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| **Area and perimeter**  - Finding the area and perimeter  - Finding the area of parallelograms  - Finding the area of triangles | **2.30: TP 3.1- 3.5, 4.1-4.5**  **2.30: TP 1.1- 1.7**  **2.30: TP 2.1-2.9** | **P30-33** | Explain, p73, 74  I know…so… p74  Different ways, p75  Which answer? P76  Different ways, p76 | [Dicey perimeter, dicey area](https://nrich.maths.org/10333) | [Perimeter, area and volume](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/Year-6-2018-19-Spring-Term-Block-5-FINAL.pdf) |
| **Volume**  - Finding the volume of cubes  - Solving problems involving the volume of solids |  | **P30-33** | Estimate, p70, 71 | [Next size up](https://nrich.maths.org/6931) |  |
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| [**Yr6 NCETM assessment materials**](C://Users/Aimee/Downloads/Mastery_Assessment_Y6_Low_Res%20(9).pdf) | **I See Reasoning** | **NRICH** | **White Rose** |
| **Geometry**  - Investigating vertically opposite angles  - Solving problems involving angles  - Investigating angles in triangles  - Investigating angles in quadrilaterals  - Naming parts of a circle  - Solving problems involving angles in a circle  - Drawing quadrilaterals.  - Drawing triangles  - Drawing nets of 3d shapes |  | **P34-36** | Different ways, p83  Explain, p83  Different ways, p84  Explain the mistakes, p84, 85 | [Shape draw](https://nrich.maths.org/10368)  [Baravelle](https://nrich.maths.org/6522)  [Making Spirals](https://nrich.maths.org/8294)  [Cut nets](https://nrich.maths.org/2315)  [Making cuboids](https://nrich.maths.org/90)  [Where are they?](https://nrich.maths.org/1058)  [Round a hexagon](https://nrich.maths.org/8095)  [Always, sometimes or never? Shape](https://nrich.maths.org/12673)  [Quadrilaterals](https://nrich.maths.org/quadrilaterals) | [Properties of shape](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/SoLs/Primary/Summer_Term_SOL/Year-6-2018-19-Summer-Block-1-Properties-of-Shape.pdf) |
| **Position and movement**  - Showing negative numbers  - Describing position  - Drawing polygons on a coordinate grid  - Describing translations  - Describing reflections  - Describing movements  - Using algebra to describe position  - Using algebra to describe movements |  | **P34-36** | Explain the mistake, p81  Explain, p82, 83  Different ways, p86, 88  Explain, p86, 88  Explain the mistakes, p87 | [Coordinate Tan](https://nrich.maths.org/1109)  [Ten hidden squares](https://nrich.maths.org/2654) | [Position and direction](https://wrm-13b48.kxcdn.com/wp-content/uploads/2020/07/Year-6-Block-4-Position-and-Direction.pdf) |
| **Graphs and averages**  - Understanding averages  - Calculating the mean  - Solving problems involving the mean  - Solving information on graphs  - Reading pie charts  - Reading line graphs  - Converting miles into kilometres | **2.26 TP: 1.1-1.4, 2.1-2.8, 3.1-3.2, 4.1-4.2** | **P37-39** | Explain, p90  Explain the mistakes, p93  Explain, p93  How many ways, p94 | [Match the matches](https://nrich.maths.org/4937)  [Birdwatch](https://nrich.maths.org/7553) | [Statistics](https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/05/Year-6-2018-19-Summer-Block-3-Statistics.pdf) |
| **Negative numbers**  - Adding and subtracting negative numbers  - Using negative numbers |  |  | Rank by difficulty, p13  Estimate, p14  Draw, p14  Explain, p15  Different ways, p16  True or false, p16 | [First connect three](https://nrich.maths.org/5865) |  |